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MESSAGE

PLEASE DELIVER DIRECTLY TO EXAMINER GITOMER

Examiner Gitomer:

Per your request, enclosed is a table showing structures that we believe should be searchable in STN or other databases and which represent the various structures claimed in claim 4 and its dependent claims (claims 4-17).

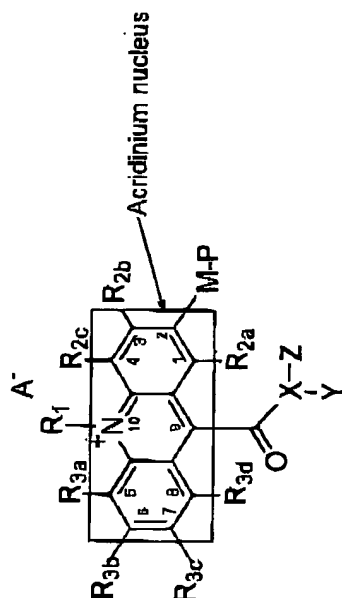

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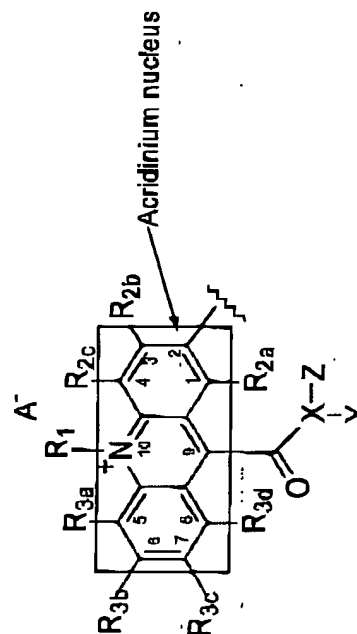
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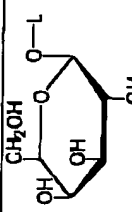
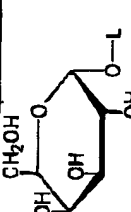
Qingping Jiang, 4/2/03

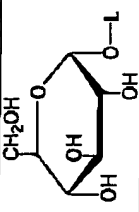
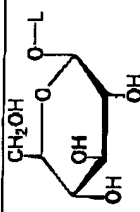
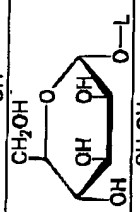
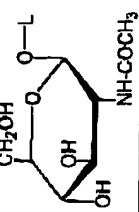
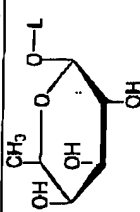
Examples of chemiluminescent substrates of hydrolytic enzymes based on Claim 4



In the table, L equals to Lumi (Luminescent moiety), having the following structure:



M	P	Example of structure L-M-P	Example of hydrolytic enzyme	Support in page # and claims
O	PO ₃ B B is a divalent cation or two monovalent cations. It can be Na ₂ , H ₂ , K ₂ , Ca or Mg.	L-O-PO ₃ Na ₂ L-O-PO ₃ H ₂ L-O-PO ₃ K ₂ L-O-PO ₃ Ca L-O-PO ₃ Mg	Alkaline Phosphatase and Acidic Phosphatase	P.22, L.3-5 P.31, L.11-22 P.32 formula VII Structures 1A, 1C, 1E, 1G and 1I Claims 4-17
O	PO ₃ R	L-O-PO ₃ -R	Phosphodiesterase	P.22, L.3-5
O	$\begin{array}{c} \text{O} \\ \parallel \\ \text{C}-\text{R} \\ \text{R} = \text{alkyl group} \end{array}$	R = alkyl group	Cholinesterase	P.22, L.17-18
O	$\begin{array}{c} \text{O} \\ \parallel \\ \text{C}-\text{R} \\ \text{R} = \text{alkyl group} \end{array}$	$\begin{array}{c} \text{O} \\ \parallel \\ \text{L}-\text{O}-\text{C}-\text{CH}_3 \end{array}$ $\begin{array}{c} \text{O} \\ \parallel \\ \text{L}-\text{O}-\text{C}-\text{R} \\ \text{R} = \text{long hydrocarbon} \\ \text{chain} \end{array}$	Lipase	P.22, L.17-18
O	SO ₃ B B is a divalent cation or two monovalent cations. It can be Na ₂ , H ₂ , K ₂ , Ca or Mg.	L-O-SO ₃ Na ₂ L-O-SO ₃ H ₂ L-O-SO ₃ K ₂ L-O-SO ₃ Ca L-O-SO ₃ Mg	Sulfatase	P.22, L.17-18
O	Sugar moiety		β-Galactosidase	P.22, L.6-9
O	Sugar moiety		α-Galactosidase	P.22, L.6-9

O	Sugar moiety		α -D(-)-Glucosidase	P.22, L.6-9
O	Sugar moiety		β -Glucosidase	P.22, L.6-9
O	Sugar moiety		α -Mannosidase	P.22, L.6-9
O	Sugar moiety		N-Acetyl- β -D-glucosaminidase	P.22, L.6-9
O	Sugar moiety		β -Fucosidase	P.22, L.6-9
N	$\begin{array}{c} \text{O} \\ \parallel \\ \text{C}-\text{R} \end{array}$ R = peptide moiety	$\begin{array}{c} \text{O} \\ \parallel \\ \text{H}-\text{N}-\text{C}-\text{R} \end{array}$ R = peptides with different sequences	Various peptidases and proteases depending on sequences of peptides and proteins	P.22, L.10-16
S	$\begin{array}{c} \text{O} \\ \parallel \\ \text{C}-\text{R} \end{array}$ R = alkyl group	$\begin{array}{c} \text{O} \\ \parallel \\ \text{L}-\text{S}-\text{C}-\text{R} \end{array}$ R = alkyl group	Lipase	P.22, L.17-18 Claim 4